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LIST OF DOCUMENTS CITED BY APPLICANT

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Attorney Docket Number	Serial No.
RA9-99-0110/4269-83	09/430,501
Applicant: Hwang, et al.	
Filing Date : October 29, 1999	Group 2731

U. S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1	5,835,538	11/10/98	Townshend	375	295	
	2	5,831,561	11/3/98	Cai et al.	341	106	
	3	5,809,075	9/15/98	Townshend	375	284	
	4	5,801,695	9/1/98	Townshend	375	340	
	5	5,793,809	8/11/98	Holmquist	375	242	
	6	5,784,405	7/21/98	Betts et al.	375	222	
	7	5,778,024	7/7/98	McDonough	375	216	
	8	5,768,311	6/16/98	Betts et al.	375	222	
	9	5,761,247	6/2/98	Betts et al.	375	316	
	10	5,757,849	5/26/98	Gelblum et al.	375	222	
	11	5,754,594	5/19/98	Betts et al.	375	285	
	12	5,729,226	3/17/98	Betts et al.	341	94	
	13	5,598,401	1/28/97	Blackwell et al.	379	94	
	14	5,546,395	8/13/96	Sharma et al.	370	84	
	15	5,534,913	7/9/96	Majeti et al.	348	7	
	16	5,528,679	6/18/96	Taarud	379	34	
	17	5,528,625	6/18/96	Ayanoglu et al.	375	222	
	18	5,406,583	4/11/95	Dagdeviren	375	5	
	19	5,394,437	2/28/95	Ayanoglu et al.	375	222	
	20	5,394,110	2/28/95	Mizoguchi	329	304	
	21	5,291,479	3/1/94	Vaziri et al.	370	58.2	
	22	5,253,291	10/12/93	Naseer et al.	379	406	
	23	5,210,755	5/11/93	Nagler et al.	370	108	
	24	5,157,690	10/20/92	Buttle	375	14	
	25	5,134,611	7/28/92	Steinka et al.	370	79	
	26	5,119,403	6/2/92	Krishnan	375	39	
	27	5,119,401	6/2/92	Tsujimoto	375	14	
	28	5,067,125	11/19/91	Tsuchida	370	79	
	29	5,052,000	9/24/91	Wang et al.	371	43	
	30	5,040,190	8/13/91	Smith et al.	375	4	
	31	5,033,062	7/16/91	Morrow et al.	375	7	
	32	5,014,299	5/7/91	Klupt et al.	379	98	
	33	4,995,030	2/19/91	Helf	370	32.1	
	34	4,985,902	1/15/91	Gurcan	375	14	
	35	4,972,360	11/20/90	Cuckier et al.	364	724.04	
	36	4,901,333	2/13/90	Hodgkiss	375	98	
	37	4,890,303	12/26/89	Bader	375	107	
	38	4,884,285	11/28/89	Heynen et al.	375	25	
	39	4,868,863	9/19/89	Hartley et al.	379	98	
	40	4,797,898	1/10/89	Martinez	375	7	

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	41	4,760,598	7/26/88	Ferrell	380	44	
	42	4,720,861	1/19/88	Bertrand	381	36	
	43	4,578,796	3/25/86	Charalambous et al.	375	8	
	44	4,577,310	3/18/86	Korsky et al.	370	58	
	45	4,450,556	5/22/84	Boleda et al.	370	58	
	46	4,434,322	2/28/84	Ferrell	178	22.13	
	47	4,270,027	5/26/81	Agrawal et al.	179	81R	
	48	4,237,552	12/2/80	Aikoh et al.	370	83	
	49	4,132,242	1/2/79	Carroll, Jr.	137	263	
	50	4,112,427	9/5/78	Hofer et al.	340	347	
	51	3,729,717	4/24/73	de Koe et al.	340	172.5	
	52	3,683,120	8/8/72	Schenkel	179	15A	
	53	3,557,308	1/19/71	Alexander et al.	178	69.5	
	54	5,918,204	6/29/99	Tsurumaru	704	214	
	55	5,914,982	6/22/99	Bjarnason et al.	375	222	
	56	5,911,115	6/8/99	Nair et al.	455	63	
	57	5,887,027	3/23/99	Cohen et al.	375	222	
	58	5,881,102	3/9/99	Samson	375	222	
	59	5,881,066	3/9/99	Lepitre	371	20.5	
	60	5,872,817	2/16/99	Wei	375	341	
	61	5,870,429	2/9/9	Moran, III et al.	375	222	
	62	5,862,184	1/19/99	Goldstein et al.	375	295	
	63	5,862,179	1/19/99	Goldstein et al.	375	242	
	64	5,862,141	1/19/99	Trotter	370	468	
	65	5,850,421	12/15/98	Misra et al.	375	354	
	66	5,850,388	12/15/98	Anderson et al.	370	252	
	67	5,844,940	12/1/98	Goodson et al.	375	222	
	68	5,838,724	11/17/98	Cole et al.	375	222	
	69	5,835,532	11/10/98	Strolle et al.	375	233	
	70	5,825,823	10/20/98	Goldstein et al.	375	286	
	71	5,825,816	10/20/98	Cole et al.	375	222	
	72	5,822,371	10/13/98	Goldstein et al.	375	242	
	73	5,815,534	9/29/98	Glass	375	326	
	74	5,812,537	9/22/98	Betts et al.	370	286	
	75	5,805,669	9/8/98	Bingel et al.	379	28	
	76	5,784,415	7/21/98	Chevillat et al.	375	341	
	77	5,757,865	5/26/98	Kaku et al.	375	344	
	78	5,734,663	3/31/98	Eggenberger	371	39.1	
	79	5,726,765	3/10/98	Yoshida et al.	358	412	
	80	5,724,393	3/3/98	Dagdeviren	375	296	
	81	5,710,792	1/20/98	Fukawa et al.	375	229	
	82	5,694,420	12/2/97	Ohki et al.	375	222	
	83	5,671,250	9/23/97	Bremer et al.	375	222	
	84	5,646,958	7/8/97	Tsujimoto	375	233	
	85	5,634,022	5/27/97	Crouse et al.	395	704	
	86	5,625,643	4/29/97	Kaku et al.	375	222	

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87	5,566,211	10/15/96	Choi	375	332	
88	5,563,908	10/8/96	Kaku et al.	375	222	
89	5,533,048	7/2/96	Dolan	375	222	
90	5,519,703	5/21/96	Chauffour et al.	370	84	
91	5,513,216	4/30/96	Gadot et al.	375	233	
92	5,475,711	12/12/95	Betts et al.	375	240	
93	5,434,884	7/18/95	Rushing et al.	375	235	
94	5,432,794	7/11/95	Yaguchi	371	5.5	
95	5,418,842	5/23/95	Cooper	379	98	
96	5,402,445	3/28/95	Matsuura	375	229	
97	5,398,303	3/14/95	Tanaka	395	51	
98	5,386,438	1/31/95	England	375	121	
99	5,351,134	9/27/94	Yaguchi et al.	358	435	
100	5,285,474	2/8/94	Chow et al.	375	13	
101	5,265,151	11/23/93	Goldstein	379	97	
102	5,253,272	10/12/93	Jaeger et al.	375	60	
103	5,225,997	7/6/93	Lederer et al.	364	550	
104	5,142,552	8/25/92	Tzeng et al.	375	14	
105	5,111,481	5/5/92	Chen et al.	375	14	
106	5,107,520	4/21/92	Karam et al.	375	60	
107	5,065,410	11/21/91	Yoshida et al.	375	98	
108	5,007,047	4/9/91	Sridhar et al.	370	32.1	
109	5,005,144	4/2/91	Nakajima et al.	364	565	
110	4,991,169	2/5/91	Davis et al.	370	77	
111	4,953,210	8/28/90	McGlynn et al.	380	48	
112	4,943,980	7/24/90	Dobson et al.	375	42	
113	4,894,847	1/16/90	Tjahjadi et al.	375	121	
114	4,890,316	12/26/89	Walsh et al.	379	98	
115	4,833,706	5/23/89	Hughes-Hartogs	379	98	
116	4,756,007	7/5/88	Qureshi et al.	375	37	
117	4,731,816	3/15/88	Hughes-Hartogs	379	98	
118	4,208,630	6/17/80	Martinez	375	7	
119	3,622,877	11/23/71	MacDavid et al.	324	73 R	
120	5,839,053	11/17/98	Bosch et al.	455	13.1	
121	5,068,875	11/26/91	Quintin	375	78	
122	5,058,134	10/15/91	Chevillat et al.	375	39	
123	5,038,365	8/6/91	Belloc et al.	375	8	
124	4,967,413	10/30/90	Otani	371	37.4	
125	5,311,578	5/10/94	Bremer et al.	379	97	
126	5,317,594	5/31/94	Goldstein	375	8	
127	5,926,506	7/20/99	Berthold et al.	375	222	
128	5,491,720	2/13/96	Davis et al.	375	222	
129	5,353,280	10/4/94	Ungerböck	370	32.1	
130	5,852,631	12/22/98	Scott	375	222	
131	5,732,104	3/24/98	Brown et al.	375	222	
132	5,796,808	8/18/98	Scott et al.	379	93.31	

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	133	5,751,796	5/12/98	Scott et al.	379	93.31	
	134	5,187,732	2/16/93	Suzuki	379	5	
	135	5,640,387	6/17/97	Takahashi et al.	370	359	
	136	5,751,717	5/12/98	Babu et al.	370	466	
	137	5,784,377	7/21/98	Baydar et al.	370	463	
	138	5,887,027	3/23/99	Cohen et al.	375	222	
	139	5,850,388	12/15/98	Anderson et al.	370	252	
	140	5,914,982	6/22/99	Bjarnason et al.	375	222	
	141	5,726,765	3/10/98	Yoshida et al.	358	412	
	142	5,850,421	12/15/98	Misra et al.	375	354	
	143	5,729,226	3/17/98	Betts et al.	341	94	
	144	5,862,184	1/19/99	Goldstein et al.	375	295	
	145	5,911,115	6/8/99	Nair et al.	455	63	
	146	5,838,724	11/17/98	Cole et al.	375	222	
	147	5,784,415	7/21/98	Chevillat et al.	375	341	
	148	5,844,940	12/1/98	Goodson et al.	375	222	
	149	5,386,438	1/31/95	England	375	121	
	150	5,881,102	3/9/99	Samson	375	222	
	151	5,285,474	2/8/94	Chow et al.	375	13	
	152	5,513,216	4/30/96	Gadot et al.	375	233	
	153	5,835,532	11/10/98	Strolle et al.	375	233	
	154	5,418,842	5/23/95	Cooper	379	98	

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes | No
A SSU mmg original AB	155	WO 98/37657	8/27/98	PCT	H04L	-	
	156	WO 96/18261	6/13/96	PCT	H04M	11/00	
	157	0 669 740 A2	12/14/94	Europe	H04L	27/00	
	158	0 659 007 A2	11/8/94	Europe	H04M	11/06	
	159	0 473 116 A2	8/27/91	Europe	H04N	1/00	
ph	160	2 345 019	3/19/76	France	H04L	27/10	Abs

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

ph	161	Erup, et al., *Interpolation in Digital Modems - Part II: Implementation and Performance*, IEEE Transactions on Communications, Vol. 41, No. 6, pp. 998-1008 (June 1993)
ph	162	Fischer, *Signal Mapping for PCM Modems*, V-pcm Rapporteur Meeting, Sunriver, Oregon, USA, , 5 pgs. (September 4-12, 1997)
ph	163	Gardner, *Interpolation in Digital Modems - Part I: Fundamentals*, IEEE Transactions on Communications, Vol. 41, No. 3, pp. 501-507 (March 1993)
ph	164	Humblet et al., *The Information Driveway*, IEEE Communications Magazine, pp. 64-68 (December 1996)
ph	165	Kalet et al., *The Capacity of PCM Voiceband Channels*, IEEE International Conference on Communications '93, pp. 507-511 (Geneva, Switzerland, May 23-26, 1993)
ph	166	Mueller et al., *Timing Recovery in Digital Synchronous Data Receiver*, IEEE Transactions on Communications, Vol. Com-24, No. 5, pp. 516-531 (May 1976)

EXAMINER Pankaj Kumar DATE CONSIDERED 10/20/03 11/20/03

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Filing Date : October 29, 1999 Group 2731

PH	167	Okubo et al., *Building Block Design of Large Capacity PCM-TDMA Subscriber System and Direct Digital Interface to Digital Exchange*, Japan Radio Co., Ltd., pp. 69-73 (Japan)
PH	168	Pahlavan et al., *Nonlinear Quantization and the Design of Coded and Uncoded Signal Constellations*, IEEE Transactions on Communications, **Vol. 39, No. 8**, pp. 1207-1215 (August 1991)
PH	169	Proakis, *Digital Signaling Over a Channel with Intersymbol Interference*, Digital Communications, pgs. 373, 381 (McGraw-Hill Book Company, 1983)
PH	170	Williams et al., *Counteracting the Quantisation Noise from PCM Codecs*, BT Laboratories, pp. 24-29 (UK)
PH	171	*A Digital Modem and Analogue Modem Pair for Use on the Public Switched Telephone Network (PSTN) at Data Signalling Rates of Up to 56 000 Bit/s Downstream and 33 600 Bit/s Upstream*, ITU-T V.90 (September 1998)
PH	172	*Series V: Data Communication Over the Telephone Network; Interfaces and voiceband modems; A modem operating at data signalling rates of up to 33 600 bit/s for use on the general switched telephone network and on leased point-to-point 2-wire telephone type circuits*, ITU-T V.34 (10/96)
PH	173	Bell, R.A., et al., *Automatic Speed Reduction and Switched Network Back-up*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 1**, pp. 154-157 (June 1989)
PH	174	Abbiate, J.C., et al., *Variable-Data Transmission Modem*, IBM Technical Disclosure Bulletin, **Vol. 17, No. 11**, pp. 3301-3302 (April 1975)
PH	175	*Data Communication Over the Telephone Network; Procedures for Starting Sessions of Data Transmission Over the General Switched Telephone Network*, ITU-T V.8 (09/94)
PH	176	*Line Quality Monitoring Method*, IBM Technical Disclosure Bulletin, **Vol. 18, No. 8**, pp. 2726-2726 (January 1976)
PH	177	*Loopback Tests for V.54 Data Communication Equipment*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 3A**, pp. 295-299 (August 1989)
PH	178	*On-Line Real Time Modem Testing*, IBM Technical Disclosure Bulletin, **Vol. 20, No. 6**, pp. 2252-2254 (November 1977)
PH	179	Pierobon, Gianfranco L., *Codes of Zero Spectral Density at Zero Frequency*, IEEE Transactions on Information Theory, **Vol. IT-30, No. 2**, pp. 435-439 (March, 1984)
PH	180	Marcus, Brian H, et al., *On Codes with Spectral Nulls at Rational Submultiples of the Symbol Frequency*, IEEE Transactions on Information Theory, **Vol. IT-33, No. 4**, pp. 557-568 (July 1987)
PH	181	Fischer, Robert, et al., *Signal Mapping for PCM Modems*, ITU-Telecommunications Standardization Sector PCM '97-120, V.pcm Rapporteur Meeting, (Sunriver, Oregon; September 4-12, 1997)
PH	182	*Pulse Code Modulation (PCM) of Voice Frequencies*, ITU-T, Recommendation G.711 (Geneva, 1972)
PH	183	*Series G: Digital Transmission Systems; Terminal equipments – Coding of analogue signals by pulse code modulation; Pulse code modulation (PCM) of voice frequencies*, ITU-T, Recommendation G.711 (Geneva, 1996)
PH	184	*Data Communication Over the Telephone Network; Error-Correcting Procedures for DCEs Using Asynchronous-to-Synchronous Conversion*, ITU-T V.42 (03/93)
PH	185	*Improvement to Spectral Shaping Technique*, Research Disclosure, **V. 41, n415,415111**, pp. 1550-1551 (November 1998)
PH	186	*TIA Standard Draft: North American Telephone Network Transmission Model for Evaluating Analog Client to Digitally Connected Server Modems*, Telecommunications Industry Association, **PN3857,Draft 10** (February 1999)
PH	187	Davis, Gordon T., *DSP and MATLAB implementation of model-based constellation generation* (September 18, 1998)
PH	188	Woodruff, K.R, et al, *Automatic and Adaptive System and Efficient Communication in Noisy Communication Line Environments*, IBM Technical Disclosure Bulletin, **Vol. 24, No. 9**, pp. 4627-4629 (February 1982)

EXAMINER Pankaj Kumar DATE CONSIDERED 10/2003 - 11/2003

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LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	Applicant: Hwang, et al.	
	Filing Date : October 29, 1999	Group 2731

	189	Godard, D., et al., *Decision Feedback Equalizer Stabilization in Adaptive Mode*, IBM Technical Disclosure Bulletin, **Vol. 24, No. 11A**, pp. 5691-5692 (April 1982)
	190	Borgnis-Desbordes, P., et al., *Variable-Speed Data Transmission*, IBM Technical Disclosure Bulletin, **Vol. 27, No. 4A**, pp. 2269-2270 (September 1984)
	191	Couland, G., et al., *Analog Wrap Self-Test in Modems During Retrain Operations*, IBM Technical Disclosure Bulletin, **Vol. 28, No. 6**, pg. 2457 (November 1985)
	192	Maddens, F., *Sixteen-State Forward Convolutional Encoder*, IBM Technical Disclosure Bulletin, **vol. 28, No. 6**, pp. 2466-2468 (November 1985)
	193	*Remote Modem-Type Self-Learning*, IBM Technical Disclosure Bulletin, **Vol. 28, No. 6**, pp. 2398-2399 (November 1985)
	194	Maddens, F., *Sixteen-State Feedback Convolutional Encoder*, IBM Technical Disclosure Bulletin, **Vol.28, No. 10**, pp. 4212-4213 (March 1986)
	195	Bell, R. A., et al., *Automatic Speed Reduction and Switched Network Back-up*, IBM Technical Disclosure Bulletin, **Vol. 32, No. 1**, pp. 154-157 (June 1989)
	196	Nobakht, R.A., *Trellis-Coded Modulation Coding Scheme for a 19/2 Kbps Modem*, IBM Technical Disclosure Bulletin, **Vol. 36, No. 11**, pp. 167-170 (November 1993)
	197	Nobakht, R.A., *Unified Table Based Subset Decoder for the Viterbi Algorithm*, IBM Technical Disclosure Bulletin, **Vol. 37, No. 09**, pp. 581-587 (September 1994)
	198	Nobakht, R.A., *Trellis Subset Decoder Algorithm Based on a Pattern Recognition Scheme*, IBM Technical Disclosure Bulletin, **Vol. 37, No. 10**, pp. 693-697 (October 1994)
	~~199~~	~~Abbiate, J.C., et al, *Variable-Data Transmission Modem*, IBM Technical Disclosure Bulletin, Vol. 17, No. 11, pp. 3301-3302 (April 1975)~~ cited in 174
	200	Barlet, J., et al., *Full Speed Recovery in High Speed Modems*, IBM Technical Disclosure Bulletin, **Vol. 23, No. 2**, pp. 641-643 (July 1980)
	201	Dialog Abstract, *Sample rate converter for duplex modem*, European Patent No. 285413
	202	Dialog Abstract, *Two-speed full-duplex modem for telephone network*, PCT No. WO 8501407
	203	Dialog Abstract, *Digital data transmission system*, European Patent No. 124674
	204	Dialog Abstract, *Facsimile communication controller*, Japanese Publication No. 04-175060 (June 23, 1992)
	205	Dialog Abstract, *Picture communication equipment*, Japanese Publication No. 03-120954 (May 23, 1991)
	206	Dialog Abstract, *Radio date transmission system*, Japanese Publication No. 01-179535 (July 17, 1989)
	207	Dialog Abstract, *Facsimile device*, Japanese Publication No. 57-164654 (October 9, 1982)
	208	Dialog Abstract, *Data repeater*, Japanese Publication No. 57-087255 (May 31, 1982)
	209	Dialog Abstract, *Blinding training method for decision feedback equaliser having feed-forward and feedback filters*, European Patent No. 880253
	210	Dialog Abstract, *Processing method for distorted signal received by qam receiver*, European Patent No. 465851
	211	Dialog Abstract, *Establishing wireless communication channel*, PCT No. WO 9905820
	212	Dialog Abstract, *High-speed rate adaptive subscriber line digital data modem*, PCT No. WO 9830001
	213	Dialog Abstract, *Digital modem in digital modulation system*, Japanese Patent No. 8116341
	214	Dialog Abstract, *Communication equipment and radio communication adapter*, Japanese Publication No. 08-340289 (December 24, 1996)
	215	Dialog Abstract, *Data recording method*, Japanese Publication No. 05-089597 (April 9, 1993)
	216	Dialog Abstract, *Transmission control system for data communication and its modem equipment*, Japanese Publication No. 02-228853 (September 11, 1990)

EXAMINER Pankaj Kumar DATE CONSIDERED 10/2003 - 11/2003

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Group 2731

ABS only

PH	217	Naguib, A.F., et al., Dialog Abstract *A space-time coding modem for high-data-rate wireless communications*, IEEE Journal of Selected Areas in Communications, Vol. 16, No. 8, pp. ~~1459-78~~ (October 1998) Pages not Provided
PH	218	Denno, S., et al., Dialog Abstract, *Mbit/s burst modem with an adaptive equalizer for TDMA mobile radio communications*, IEICE Transactions on Communications, Vol. E81-B, No. 7, ~~pp. 1453-61~~ (July 1998) Pages not Provided
PH	219	Naguib, A.F., et al., Dialog Abstract *A space-time coding modem for high-data-rate wireless communications*, GLOBECOM 97, IEEE Global Telecommunications Conference, Vol. 1, pp. ~~102-9~~ (1997) Pages not Provided
PH	220	Kobayashi, K., et al., Dialog Abstract, *Fully digital burst modem for satellite multimedia communication systems*, IEICE Transactions on Communications, vol. E80-B, No. 1, ~~pp. 8-15~~ (January 1997) Pages not Provided
PH	221	Skellern, D.J., et al., Dialog Abstract, *A high speed wireless LAN*, IEEE Micro, Vol 17, No. 1, ~~pp. 40-47~~ (January-February 1997) Pages not Provided
	222	Enomoto, K., et al., Dialog Abstract, *A mode switching type burst demodulator AFC*, Transactions of the Institute of Electronics, Information and Communication Engineers, Vol. J76B-II, No. 5, pp. 415-21 (May 1993) NOT PROVIDED
	223	Betts, W., Dialog Abstract, *Nonlinear encoding by surface projection*, International Conference on Data Transmission – Advances in Modem and ISDN Technology and Applications (September 23-25, 1992) NOT PROVIDED
PH	224	Schilling, D.L., et al., Dialog Abstract, *The FAVR meteor burst communication experiment*, Military Communications in a Changing World MILCOM '91 (November 4-7, 1991)
PH	225	Jacobsmeyer, J.M., Dialog Abstract, *Adaptive trellis-coded modulation for bandlimited meteor burst channels*, IEEE Journal on Selected Areas in Communications, Vol. 10, No. 3, ~~pp. 550-61~~ (April 1992) Pages not Provided
PH	226	Sato, T., et al., Dialog Abstract, *Protocol configuration and verification of an adaptive error control scheme over analog cellular networks*, IEEE Transactions on Vehicular Technology, Vol. 41, No. 1, ~~pp. 69-76~~ (February 1992) Page not Provided
PH	227	Lee, L.-N., et al., Dialog Abstract, *Digital signal processor-based programmable BPSK/QPSK/offset-QPSK modems*, COMSAT Technical Review, ~~pp. 195-234~~ (Fall 1989) Page not Provided
PH	228	Sato, T., et al., Dialog Abstract, *Error-free high-speed data modem*, Oki Technical Review, Vol. 56, No. 133, ~~pp. 20-26~~ (April 1989) Page not Provided
PH	229	Seo, J.-S, et al., Dialog Abstract, *Performance of convolutional coded SQAM in hardlimited satellite channels*, IEEE International Conference on Communications BOSTONICC/89, Vol. 2, ~~pp. 787-91~~ (June 11-14, 1989) pages not Provided
PH	230	Murakama, K., et al., Dialog Abstract, *FEC combined burst-modem for business satellite communications use*, IEEE/IECE Global Telecommunications Conference 1987, Vol. 1, ~~pp. 274-80~~ (Japan, November 15-18, 1987) Pages not Provided
PH	231	McVerry, F., Dialog Abstract, *Performance of a fast carrier recovery scheme for burst-format DQPSK transmission over satellite channels*, International Conference on Digital Processing of Signals in Communications, ~~pp. 165-72~~ (United Kingdom, 1985) Pages not provided
PH	232	Filter, J.H.J., Dialog Abstract, *An algorithm for detecting loss of synchronisation in data transmission test sets (modems)*, Transactions of the South African Institute of Electrical Engineers, Vol. 76, No. 1, ~~pp. 39-43~~ (January 1985) Page not provided
PH PH	233	Gersho, A., Dialog Abstract, *Reduced complexity implementation of passband adaptive equlizers*, IEEE Journal on Selected Areas in Communications, Vol. SAC-2, No. 5, ~~pp. 778-9~~ (September 1984) Page not Provided
PH	234	Dialog Abstract, *High-speed full-duplex modem reduces telephone connect time*, EDN, Vol. 27, No. 18, ~~pg. 77~~ (September 15, 1982) Page not provided

EXAMINER Parker Kemm DATE CONSIDERED 10/2003 - 11/2003

*EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office	Attorney Docket Number RA9-99-0110/4269-83	Serial No. 09/430,501
LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary)	Applicant: Hwang, et al.	
	Filing Date : October 29, 1999	Group 2731

PH	235	Chadwick, H., et al., Dialog Abstract, *Performance of a TDMA burst modem through a dual nonlinear satellite channel*, Fifth International Conference on Digital Satellite Communications, pp. 63-7 (Italy, March 23-26, 1981) pages not Provided
PH	236	Nussbaumer, H., Dialog Abstract, *Reducing the acquisition time in an automatic equalizer*, IBM Technical Disclosure Bulletin, Vol. 18, No. 5, pp. 1465-79 (October 1975) Pages not Provided
PH	237	Uzunoglu, V., et al., Dialog Abstract, *Synchronous and the coherent phase-locked synchronous oscillators: new techniques in synchronization and tracking*, IEEE Transactions on Circuits and Systems, Vol. 36, No. 7, pp. 997-1004 (July 1989) Pages not Provided
PH	238	Minei, I., et al., Dialog Abstract, *High-speed Internet access through unidirectional geostationary satellite channels*, IEEE Journal on Selected Areas in Communications, Vol. 17, No. 2, pp. 345-59 (February 1999) Pages not Provided
PH	239	Ovadia, S., Dialog Abstract, *The effect of interleaver depth and QAM channel frequency offset on the performance of multichannel AM-VSB/256-QAM video lightwave transmission systems*, International Conference on Telecommunications: Bridging East and West Through Communications, Vol. 1, pp. 339-43 (Greece, June 21-25, 1998) Pages not Provided
PH	240	Johnson, R.W., et al., Dialog Abstract, *Error correction coding for serial-tone HG transmission*, Seventh International Conference on HF Radio Systems and Techniques, pp. 80-84 (United Kingdom, July 7-10, 1997) Pages not Provided
PH	241	Karasawa, Y., et al., Dialog Abstract, *Cycle slip in clock recovery on frequency-selective fading channels*, IEEE Transactions on Communications, Vol. 45, No. 3, pp. 376-83 (Mach 1997) Pages not Provided
PH	242	Umehira, M., et al., Dialog Abstract, *Design and performance of burst carrier recovery using a phase compensated filter*, Transactions of the Institute of Electronics, Information and Communication Engineers, Vol. J78B-II, No. 12, pp. 735-46 (December 1995) Pages not Provided
PH	243	De Bot, P., et al., Dialog Abstract, *An example of a multi-resolution digital terrestrial TV modem*, Proceedings of ICC '93 – IEEE International Conference on Communications, Vol. 3, pp. 1785-90 (Switzerland, May 23-26, 1993) Pages not Provided
PH	244	Lei, Chen, et al., Dialog Abstract, *Single-tone HF high speed data modem*, Proceedings of TENCON '93 – IEEE Region 10 International Conference on Computers, Communications and Automation, Vol. 3, pp. 94-98 (China, October 19-21, 1993) Pages not Provided
PH	245	Woerner, B.D., et al., Dialog Abstract, *Simulation issues for future wireless modems*, IEEE Communications, Vol. 32, No. 7, pp. 42-53 (July 1994) Pages not Provided
PH	246	Sato, T., et al., Dialog Abstract, *Vehicle terminal equipment with dedicated DSP*, Oki Technical Review, Vol. 58, No. 144, pp. 49-52 (July 1992) Pages not Provided
PH	247	Sato, T., et al., Dialog Abstract, *Protocol configuration and verification of an adaptive error control scheme over analog cellular networks*, IEEE Transactions on Vehicular Technology, Vol. 41, No. 1, pp. 69-76 (February 1992) Pages not Provided
PH	248	Tamm, Yu.A., Dialog Abstract, *The effect of suppressing harmonic interference using an adaptive equalizer*, Elektrosvyaz, Vol. 45, No. 3, pp. 5-10 (Mach 1990) Pages not Provided
PH	249	Saleh, A.A.M., et al., Dialog Abstract, *An experimental TDMA indoor radio communications systemusing slow frequency hopping and coding*, IEEE Transactions on Communications, Vol. 39, No. 1, pp. 152-62 (January, 1991) Pages not Provided
PH	250	Nergis, A., Dialog Abstract, *Optimum HF digital communication systems with block coding and interleaving techniques*, Proceedings of the 1990 Bilkent International Conference on New Trends in Communication, Control and Signal Processing, Vol. 1, pp. 511-17 (Turkey, July 2-5, 1990) Pages not Provided
PH	251	Kawamata, F., et al., Dialog Abstract, *An evaluation of voice codecs and facsimiles*, Review of the Communications Research Laboratory, Vol. 36, pp. 69-73 (March 1990) Pages not Provided

EXAMINER Pankaj Kumar DATE CONSIDERED 10/2003 - 11/2003

*EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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LIST OF DOCUMENTS CITED BY APPLICANT

(Use several sheets if necessary)

Attorney Docket Number	Serial No.
RA9-99-0110/4269-83	09/430,501

Applicant: Hwang, et al.

Filing Date : October 29, 1999 Group 2731

PH	252	Sato, T., et al., Dialog Abstract, *Error-free high-speed data transmission protocol simultaneously applicable to both wire and mobile radio channels*, 38th IEEE Vehicular Technology Conference: 'Telecommunications Freedom – Technology on the Move', pp. 489-96 (June 15-17, 1988) Pages not provided
PH	253	Dialog Abstract, *1200-bit/s cellular modem DLD03H*, Oki Technical Review, Vol. 53, No. 127, pp. 70-72 (July 1987) Pages not Provided
PH	254	Chamberlin, J.W., et al., Dialog Abstract, *Design and field test of a 256-QAM DIV modem*, IEEE Journal on Selected Areas in Communications, Vol. SAC-5, No. 3, pp. 349-56 (April 1987) Pages not Provided
PH	255	De Cristofaro, R., et al., Dialog Abstract, *A 120 Bv/s QPSK modem designed for the INTELSAT TDMA network*, International Journal of Satellite Communications, Vol. 3, Nos. 1-2, pp. 145-60 (JanuaryJune, 1985) Pages not Provided
PH	256	Shumate, A., Dialog Abstract, *Error correction coding for channels subject to occasional losses of bit count integrity*, IEEE Military Communications Conference, Vol. 1, pp. 89-83 (October 21-24, 1984) Pages not Provided
PH	257	Suyderhoud, H., et al., Dialog Abstract, *Investigation of 9.6 kb/s data transmission via a PCM link at 64 kb/s with and without link errors*, International Journal of Satellite Communications, Vol. 2, No. 1, pp. 81-87 (January-March, 1984) Pages not Provided
PH	258	Smith, C., Dialog Abstract, *Relating the performance of speech processors to the bit error rate*, Speech Technology, Vol. 2, No. 1, pp. 41-53 (September-October 1983) Pages not Provided
PH	259	Suyderhoud, H., et al., Dialog Abstract, *Investigation of 9.6-kbit/s data transmission via a PCM link at 64 kbit/s with and without link errors*, Sixth International Conference on Digital Satellite Communications Proceedings, pp. 26-33 (September 19, 23, 1983) Pages not Provided
PH	260	Kittel, L., Dialog Abstract, *Analogue and discrete channel models for signal transmission in mobile radio*, Frequenz, Vol. 36, Nos. 4-5, pp. 153-60 (April-May 1982) Pages not Provided
PH	261	Farrell, P.G., et al., Dialog Abstract, *Soft-decision error control of h.f. data transmission*, IEE Proceedings F (Communications, Radar and Signal Processing), Vol. 127, No. 5, pp. 389-400 (October 1980) Pages not Provided
PH	262	Johnson, A.L., Dialog Abstract, *Simulation and implementation of a modulation system for overcoming ionospheric scintillation fading*, AGARD Conference Proceedings No. 173 on Radio Systems and the Ionosphere, pp. 3/1-5 (Greece, May 26-30, 1975) Pages not Provided
PH	263	Matsumura, K., et al., Dialog Abstract, *Anti-interference data-transmission set of HF radio equipment*, Mitsublishi Electric Engineer, No. 41, pp. 18-23 (September, 1974) Pages not Provided
PH	264	Blank, H.A., et al., Dialog Abstract, *A Markov error channel model*, 1973 National Telecommunications Conference, Vol. 1, pp. 15B/1-8 (November 26-28, 1973) Pages not Provided
PH	265	McGruther, W.G., Dialog Abstract, *Long term error performance data for operation at 2400 bps ona nonswitched private line network*, Summaries of papers presented at 1970 Canadian symposium on communications, pp. 65-6 (Canada, November 12-13, 1970) Pages not Provided
PH	266	Burton, H.O., et al., Dialog Abstract, *On the use of error statistics from data transmission on telephone facilities to estimate performance of forward-error-correction*, 1970 international conference on communications, p. 21 (June 8-10, 1970) Page not Provided
PH	267	Bowen, R.R., Dialog Abstract, *Application on burst error correction codes to data modems for dispersive channels*, Proceedings of the 1970 international symposium on information theory, p. 1 (Netherlands, June 15-19, 1970) Page not Provided
PH	268	Pierce, A.W., et al., Dialog Abstract, *Effective application of forward-acting error-control coding to multichannel h.f. data modems*, IEEE Transactions on Communication Technology, Vol. Com-18, No. 4, pp. 281-94 (August 1970) Pages not Provided
PH	269	West, R.L., Abstract, *Data Concentration Method*, IBM Technical Disclosure Bulletin, pp. 487-489; http://w3.infogate.ibm.com:1207/SESS506884/GETDOC/39/2/1 (July, 1975)

EXAMINER Pankaj Kumar DATE CONSIDERED 10/2003 - 11/2003

*EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Patent and Trademark Office

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(Use several sheets if necessary)

Attorney Docket Number	Serial No.
RA9-99-0110/4269-83	09/430,501

Applicant: Hwang, et al.

Filing Date : October 29, 1999

Group 2731

PLa	270	Haas, L.C., et al., Abstract, *Received Line Signal Quality Analysis*, IBM Technical Disclosure Bulletin, pp. 5414-5416; http://w3.infogate.ibm.com:1207/SESS506884/GETDOC/43/1/1 (May, 1981)
PLa	~~271~~	~~Nussbaumer, H., Abstract, *Reducing the Acquisition Time in an Automatic Equalizer*, IBM Technical~~ Disclosure Bulletin, pp. 1465-1479; http://w3.infogate.ibm.com:1207/SESS506884/GETDOC/40/2/1 (October 1975)
PLa	272	Dialog Abstract, *Listener echo canceller for digital communication system*, PCT No. WO 9310607
PLa	273	Dialog Abstract, *Reduced time remote access method for modem computer*, PCT No. WO 9209165

EXAMINER Pankaj Kumar DATE CONSIDERED 10/2003 - 11/2003

*EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.